

UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
STANDARD BROADCAST STATION LICENSE

File No. HL-9442
Call Letters WION

Subject to the provisions of the Communications Act of 1934, subsequent Acts, and Treaties, and Commission Rules made thereunder, and further subject to conditions set forth in this license, 1 the LICENSEE

MONROE MacPHERSON tr/as IONIA BROADCASTING COMPANY

is hereby authorized to use and operate the radio transmitting apparatus hereinafter described for the purpose of broadcasting for the term beginning December 28, 1962, and ending October 1, 1964
(3 a.m., Eastern Standard Time) (3 a.m., Eastern Standard Time)

The licensee shall use and operate said apparatus only in accordance with the following terms:

1. On a frequency of 1430 kc.
2. With watts power directional antenna nighttime

| | |
|---------------|--------------------------------|
| <u> </u> | current, <u> </u> amperes |
| <u> </u> | resistance, <u> </u> ohms |

and 5 kilo watts power directional antenna daytime

| | |
|---------------------|------------------------------|
| <u>Common Point</u> | current, <u>10.2</u> amperes |
| <u>Common Point</u> | resistance, <u>48.1</u> ohms |

3. During the following period or periods of time: Daytime as follows:

Jan. 8:00 am to 5:30 pm; Feb. 7:30 am to 6:15 pm;
Mar. 7:00 am to 6:45 pm; Apr. 6:00 am to 7:15 pm;
May 5:15 am to 8:00 pm; June 5:00 am to 8:15 pm;
July 5:15 am to 8:15 pm; Aug. 5:45 am to 7:45 pm;
Sep. 6:15 am to 6:45 pm; Oct. 6:45 am to 6:00 pm;
Nov. 7:30 am to 5:15 pm; Dec. 8:00 am to 5:00 pm;
Eastern Standard Time

4. With the station located at:

Ionis, Michigan

5. With the main studio located at:

RR #3, County Rd. 577
Ionis, Michigan

The apparatus herein authorized to be used and operated is located at:

RR #3, County Rd. 577
Ionis, Michigan

North Lat. 43 ⁰ 00 ¹⁶ "
West Long. 85 ⁰ 05 ⁰⁹ "

and is described as follows:

RCA MFO. CO., Type No. STA-5T, Broadcasting Transmitter.

Obstruction marking specifications in accordance with paragraphs 1, 3, 11 and 21 of FCC Form 715 attached.

The Commission reserves the right during said license period of terminating this license or making effective any changes or modification of this license which may be necessary to comply with any decision of the Commission rendered as a result of any hearing held under the rules of the Commission prior to the commencement of this license period or any decision rendered as a result of any such hearing which has been designated but not held, prior to the commencement of this license period.

This license is issued on the licensee's representation that the statements contained in licensee's application are true and that the undertakings therein contained so far as they are consistent herewith, will be carried out in good faith. The licensee shall, during the term of this license, render such broadcasting service as will serve public interest, convenience, or necessity to the full extent of the privileges herein conferred.

This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequency designated in the license beyond the term hereof, nor in any other manner than authorized herein. Neither the license nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This license is subject to the right of use or control by the Government of the United States conferred by section 606 of the Communications Act of 1934.

1 This license consists of this page and pages 2 and 3

Dated this 28th day of December, 1962



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FEDERAL COMMUNICATIONS COMMISSION,

Don F. Waples

Acting

Secretary

File No. BL-9442 Call Letters WION Date 12-28-62

1. DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM

DA- D

No. and Type of Elements: Three uniform cross-section, guyed, series-excited vertical steel radiators. Communications type antenna mounted near top of tower #3(W). ✓

Height above Insulators: 195' (102°)

Overall Height: 199'

Spacing and Orientation: 152.9' (80°) on a line bearing 345° true.

Non-Directional Antenna: None used.

Ground System consists of 120 equally spaced, buried copper radials 200' in length except where shortened at property lines or common transverse strap about the base of each tower.

2. THEORETICAL SPECIFICATIONS

| | <u>S. Tower (1)</u> | <u>S. Tower (2)</u> | <u>N. Tower (3)</u> |
|--------------|---------------------|---------------------|---------------------|
| Phasing: | 144° | 0° | -144° |
| Field Ratio: | 0.953 | 1.0 | 0.343 |

3. OPERATING SPECIFICATIONS

| | | | |
|---|-------|-----|-------|
| Phase Indication:* | 149° | 0° | -161° |
| Antenna Base Current Ratio: | 0.807 | 1.0 | 0.378 |
| <u>Phase monitor sample</u> Current Ratio: | 1.430 | 1.0 | 0.657 |

*As indicated by Hens Clarke 108-B phase monitor.

Phase indications and antenna base currents shall be read and entered in the operating log at least once each hour. Phase monitor sample currents may be read and logged in lieu of base currents provided base currents are read and logged at least once daily.

Field measuring equipment shall be available at all times, and the field intensity at each of the monitoring points shall be measured at least once every seven days and an appropriate record kept of all measurements so made.

DESCRIPTION OF AND FIELD INTENSITY AT MONITORING POINTS:

Direction of 105° true North. Proceed south from the transmitter on Haynor Rd. 1.2 miles to Rt. 21, known as the Blue Water Highway. Proceed east on Rt. 21 3 miles to a point 0.1 mile northeast of its intersection with Prairie Creek Rd. Point is on the west side of the road near the top of a rise. This is point No. 23 on this radial. The field intensity measured at this point should not exceed 18 mv/m.

Direction of 165° true North. Proceed south from the transmitter on Haynor Rd. 1.2 miles to Rt. 21, known as the Blue Water Highway. Proceed east on Rt. 21 0.7 mile to its intersection with south-bound Rt. 66. Proceed south on Rt. 66 1.5 miles. Point is located atop old stump 40 ft. northwest of highway into roadside park. This is point no. 24 on this radial. The field intensity measured at this point should not exceed 61 mv/m.

Direction of 210° true North. Proceed south from the transmitter on Haynor Rd. 1.2 miles to Rt. 21, known as the Blue Water Hwy. Proceed west and southwest on Rt. 21 one mile. Point is located on the north side of the highway in the service road to the Michigan Medium-Security Prison. A highway department benchmark is located on the southside of highway. This is point no. 16 on this radial. The field intensity measured at this point should not exceed 37 mv/m.

Direction of 240° true North. Proceed south from the transmitter on Haynor Rd. 1.2 miles to Rt. 21, known as the Blue Water Hwy. Proceed west and southwest on Rtl. 21 2.7 miles to Bellamy Rd. 0.75 mile. N. on Bellamy Rd Point is on the west side of the road, 40 ft. north of the top of the rise, opposite house numbered 196 Bellamy Rd. This is point no. 23 on this radial. The field intensity measured at this point should not exceed 30 mv/m.

ANTENNA TOWER(S) OR SUPPORTING STRUCTURE(S)

It is to be expressly understood that the issuance of these specifications is in no way to be considered as precluding additional or modified marking or lighting as may hereafter be required under the provisions of Section 303(q) of the Communications Act of 1934, as amended.

1 Antenna structures shall be painted throughout their height with alternate bands of aviation surface orange and white, terminating with aviation surface orange bands at both top and bottom. The width of the bands shall be equal and approximately one-seventh the height of the structure, provided however, that the bands shall not be more than 40 feet nor less than 1-1/2 feet in width. All towers shall be cleaned or repainted as often as necessary to maintain good visibility.

2 There shall be installed at the top of the tower at least two 100-, 107-, 111- or 116-watt lamps (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in aviation red obstruction light globes. The two lights shall burn simultaneously from sunset to sunrise and shall be positioned so as to insure unobstructed visibility of at least one of the lights from aircraft at any angle of approach. A light sensitive control device or an astronomic dial clock and time switch may be used to control the obstruction lighting in lieu of manual control. When a light sensitive device is used it should be adjusted so that the lights will be turned on at a north sky light intensity level of about thirty-five foot candles and turned off at a north sky light intensity level of about fifty-eight foot candles.

3 There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 500- or 620-watt lamps (PS-40, Code Beacon type), both lamps to burn simultaneously, and equipped with aviation red color filters. Where a rod or other construction of not more than 20 feet in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute with a period of darkness equal to one-half of the luminous period.

4 At approximately one-half of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event this beacon cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

5 At approximately two-fifths of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event this beacon cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

6 On levels at approximately two-thirds and one-third of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

7 On levels at approximately four-sevenths and two-sevenths of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

8 On levels at approximately three-fourths, one-half and one-fourth of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons, at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

9 On levels at approximately two-thirds, four-ninths and two-ninths of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

10 On levels at approximately four-fifths, three-fifths, two-fifths, and one-fifth of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed heights.

11 At the approximate mid point of the over-all height of the tower there shall be installed at least two 100-, 107-, 111- or 116-watt lamps (#100 A21/TS, #107 A21/TS, #111 A21/TS, or #116 A21/TS, respectively) enclosed in aviation red obstruction light globes. Each light shall be mounted so as to insure unobstructed visibility of at least one light at each level from aircraft at any angle of approach.

12 On levels at approximately two-thirds and one-third of the over-all height of the tower, there shall be installed at least two 100-, 107-, 111 or 116-watt lamps (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in aviation red obstruction light globes. Each light shall be mounted so as to insure unobstructed visibility of at least one light at each level from aircraft at any angle of approach.

13 On levels at approximately three-fourths and one-fourth of the over-all height of the tower, at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

14 On levels at approximately four-fifths, three-fifths and one-fifth of the over-all height of the tower, at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

15 On levels at approximately five-sixths, one-half, and one-sixth of the over-all height of the tower, at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

16 On levels at approximately six-sevenths, five-sevenths, three-sevenths and one-seventh of the over-all height of the tower at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

17 On levels at approximately seven-eighths, five-eighths, three-eighths, and one-eighth of the over-all height of the tower, at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

18 On levels at approximately eight-ninths, seven-ninths, five-ninths, one-third and one-ninth of the over-all height of the tower, at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

19 On levels at approximately nine-tenths, seven-tenths, one-half, three-tenths, and one-tenth of the over-all height of the tower, at least one 100-, 107-, 111- or 116-watt lamp (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the tower at each level.

20 All lighting shall be exhibited from sunset to sunrise unless otherwise specified.

21 All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on at a north sky light intensity level of about 35 foot candles and turned off at a north sky light intensity level of about 58 foot candles.

22 During construction of an antenna structure, for which obstruction lighting is required, at least two 100-, 107-, 111- or 116-watt lamps (#100 A21/TS, #107 A21/TS, #111 A21/TS or #116 A21/TS, respectively) enclosed in aviation red obstruction light globes, shall be installed at the uppermost point of the structure. In addition, as the height of the structure exceeds each level at which permanent obstruction lights will be required, two similar lights shall be installed at each such level. These temporary warning lights shall be displayed nightly from sunset to sunrise until the permanent obstruction lights have been installed and placed in operation, and shall be positioned so as to insure unobstructed visibility of at least one of the lights at any angle of approach. In lieu of the above temporary warning lights, the permanent obstruction lighting fixtures may be installed and operated at each required level as each such level is exceeded in height during construction.